

Application No. 10/811,561 Page 2

IN THE CLAIMS:

Claims 1 – 2 (Canceled)

Claim 3 (Withdrawn)

4. (Currently Amended) The leadscrew drive of claim 17 ~~4~~, wherein the ~~elongated annular~~ leadscrew shell has a ration of annular thickness to a cylindrical outer diameter of not more than 0.01.

5. (Currently Amended) The leadscrew drive of claim 17 ~~4~~, wherein the ~~elongated annular~~ leadscrew shell has a ration of annular thickness to a cylindrical outer diameter of not more than 0.001.

Claims 6 – 16 (Canceled)

17. (New) A leadscrew drive system comprising:
a leadscrew follower: and
a cylindrically shaped leadscrew shell having a ratio of annular thickness to cylindrical diameter within a range of about 0.0004 to about 0.01.

18. (New) The leadscrew drive of claim 17, wherein the leadscrew shell is formed of an electroless deposited nickel-based matrix with polytetrafluoroethylene particles.

19. (New) The leadscrew drive of claim 18, wherein the amount of polytetrafluoroethylene particles is about 20% by volume.

20. (New) The leadscrew drive of claim 17, wherein the leadscrew shell is formed of a high density, low porosity material.

Application No. 10/811,561 Page 3

21. (New) A small diameter, low to medium duty leadscrew drive system comprising:

a cylindrically shaped, flexible leadscrew having a hollow interior and a ratio of annular thickness to cylindrical diameter within a range of about 0.0004 to about 0.01.

22. (New) The leadscrew drive of claim 21, wherein the leadscrew is formed of a high density, low porosity material.

23. (New) The leadscrew drive of claim 22, wherein the leadscrew is formed of nickel based material.

24. (New) The leadscrew drive of claim 22, wherein the leadscrew is formed of a non-metal embedded metallic matrix.

25. (New) The leadscrew drive of claim 24, wherein the leadscrew is formed of an electroless deposited nickel-based matrix with polytetrafluoroethylene particles.

26. (New) The leadscrew drive of claim 21, wherein the leadscrew is formed of a material resulting in the leadscrew having axial strength and stiffness parallel to the longitudinal axis of the leadscrew and stability in bending perpendicular to the longitudinal axis of the leadscrew.